Chapter-3

Research Methodology

"A motorcycle mechanic . . . who honks the horn to see if the battery works is informally conducting a true scientific experiment. He is testing a hypothesis by putting the question to nature." - ROBERT M. PIRSIG

3.0 Introduction

The detailed discussion on methodology followed for the achievement of the research objectives is presented in this chapter. This investigation is designed to study organizational role stress (ORS), and organizational HRD-climate, and how ORS is impacted by HRD-Climate in the select public and private sector banks in NCR-Delhi. It was also intended to compare the executives of these banks at three hierarchical levels (i.e. lower, middle, and senior management), of public and private banks on measures of ORS and HRD-climate. The research methodology (Methods and Procedures) used to achieve the research objectives, has been dealt in the succeeding sections.

The experience of role stress is a general and common phenomenon of work, especially in the banking sector where money is the major product. As per Abdullah et al., (2011) stress is most prominent outcome and is cumulatively accumulating in banking sector for two very important reasons. Firstly, huge sums are involved thus one is exposed to high pressures, and secondly, banking sector being a purely service sector so customer relationship management decides the fate of the sector." The banks operate with stiff competition throughout the country, from a small village to big cities with manifested role-stress, pressures, and threats to their employees.

The public and private sector banks are facing mutual stiff competition. Their competition is further aggravated in the wake of external influences of the other financial institutions, non-banking financial companies, and foreign financial institutions. In a drive to combat and excel in the prevailing internal and
external (operating, industry and remote) environments, the public and private bank executives are being increasingly subjected to work-pressures and tensions (organizational role stress). Privatisation, globalization, government polices and frequent changes therein, rise in reserve bank polices and regulatory aspects, computerization, rapid bank expansions, unrealistic employee targets, shortage of employees due to cost cutting, rising work pressures, long working hours, unrealistic work targets are some of the illustrative causative factors behind organizational role stress.

3.1 Research Questions/Problem Definition

Statement of the Problem: In the backdrop of the literature review and above discussion, the researcher has undertaken the study, on a vibrant topic of current immense value entitled: “Executive Role Stress and HRD Climate Interplay: A Comparative Study of Select Public and Private Banks in NCR.”

The formal quantitative research process should not begin until the research problem has been clearly defined. Properly and completely defining a problem is easier said than done. If quantitative research is conducted before learning exactly what issues are important, false conclusions may be drawn from the investigation. The right answer to the wrong question may be absolutely worthless. A decision made on the basis of a solution to the wrong problem may actually be harmful.

Research problem definition leads to formation of research objectives. The pivotal research question of this research is: "Whether Role-stress dimensions and HRD-climate dimensions in their interactions exhibit any significant (causal/moderator) relationship."

To achieve the specific research objectives the following (four distinct but related) research questions will guide the direction of the study:

1. What is the level of ORS in the select public and private banks?
2. What is the level of HRD-Climate in the select public and private banks?

3. How ORS is impacted by HRD-Climate in the work setting of the select public and private banks?

4. Do ORS and HRD-Climate exhibit any significant (causal/moderator) relationship?

3.2 Originality/Value of research

By investigating the relationship between organizational role stress, and HRD climate in executives in the domain of public and private sector banks, in NCR, New Delhi, India; the present study has made an effort to fulfil the gap in academic literature where there is a significant dearth of academic literature on their interplay. It is pertinent to take note that the “literature review” has established that there is a sever paucity of research work on the study of "organizational role-stress" in the context of “banking sector”. In the current scanty and fragmentary research work scenario on "role-stress", there is still further a marginal/nil research work available on the study of "organizational role stress" in the specific segment comprising of: (a) public and private banks (in NCR Delhi), (b) and to study the interplay /role/influences of "HRD-Climate", (c) on the "organizational role-stress". The present study thus endeavours to address these purposes to fill the felt research-gap.

3.3 Purpose/Aims of the study

This exploratory research study is titled: “Executive Role Stress and HRD Climate Interplay: A Comparative Study of Select Public and Private Banks in NCR.” Executive role stress implies the ORS suffered by them. Researchers in the studies of increasing complexity of organizational roles have recognized the potential of conflict and stress in their roles. This research empirically investigates how ORS is impacted by HRD-Climate in the work setting of public and private banks. The main purpose of this study is to deepen the understanding
of the relationship between Organizational Role Stress (ORS) and HRD Climate and to test the moderating effect of climate in their inter-se relationship. The aims of the research study are:

1. To study, and empirically analyze the existing level of organizational role stress (ORS) of the bank executives.
2. To study, and empirically analyze the existing level of the organizational HRD-Climate of banks.
3. To find out the impacts of HRD-climate on organizational role-stress
4. To know if organizational HRD-Climate moderates ORS?
5. To test whether Role-stress and HRD-climate exhibit any (causal) interrelationship.
6. To suggest ways to manage ORS in banks/banking sector.
7. To suggest ways to improve HRD-Climate in banks/banking sector.
8. To suggest to fine-tune HR-interventions in the banks.
9. To provide benefits of research by making some generalizations and thereby to add in the existing knowledge pool of organizational role stress management.

### 3.4 Research Design

A researcher is like an engineer who meticulously plans everything before he takes up the work; it is like a "blueprint" or "plan of action". Philips, Bernard S. (1971)\(^{(449)}\) gave a more searching definition, According to him, "research design constitutes the blueprint for collection, measurement and analysis of data. It aids the scientist in the allocation of his limited resources by posing crucial choices:

1. Is the blueprint to include experiments, interviews, observation, and the analysis of records, simulation or some combination of these?
2. Are the methods of data collection and research situation highly structured?
3. Is an intensive study of a small sample more effective than a less intensive study of a large sample?

4. Should the analysis primarily be quantitative or qualitative?

"The aim of a research design is to provide a planned and structured way of achieving the research goal and to enhance validity and reliability. The research design is a depiction or blueprint of the research project that is being pursued. The process to be followed is decided beforehand in order to prevent errors and keep costs as low as possible" - Mouton & Marais, (1990). Highly structured and controlled research is the ultimate goal for a quantitative researcher.

The aim of the research design is to plan and structure the project in such a way that the resulting validity of the research findings are increased. Internal validity is the logical forerunner to external validity and research findings cannot therefore possess external validity before they are considered to have internal validity. Research with a contextual interest places the highest priority on internal validity (Mouton & Marais, 1990). Research design is the conceptual structure within which research would be conducted and its function is to provide for the collection of relevant evidence with minimal expenditure of effort, time and money.

The present study is descriptive cum exploratory correlational study that seeks to explore the relationship between Organizational Role Stress and HRD Climate in public and private sector banks.

3.5 Scope of the Study

- The geographical scope: It comprises of NCR-Delhi region. Four banks i.e., two public, and two private sector banks, located in NCR-Delhi, were selected by stratified random sampling method. The National Capital Region (NCR) is a metropolitan city or region which includes the Delhi region plus the surrounding urban areas in neighbouring states of Haryana, Uttar Pradesh and Rajasthan. The NCR is India's largest and
world's second largest urban agglomeration with a population of over 22 million inhabitants.

- **Sectoral scope:** It focuses on public and private sector banks.
- **Topical scope:** It focuses on the existence level of organizational role stress and HRD-Climate in public and private sector banks and to find out the interrelationship among these two constructs.
- **Analytical scope:** is limited to the fulfillment of the objectives set out and testing of the hypotheses.
- **Functional Scope:** The functional scope is confined to offering a set of meaningful suggestions for reducing ORS and improvement of HRD-climate in public and private banks.

### 3.6 Research objectives of the study

The purpose of a research is to discover answers to questions through the application of scientific procedures. The aim being to find out the latent truth which has not yet been discovered. This study will empirically investigate the listed research questions. In light of the domain of research, the research study has set the following objectives:

1. To enhance the understanding of role stress and HRD Climate constructs, their nature and complexity.
2. To empirically evaluate the existing level of Organizational Role-Stress, in all the select (Pub. and Pvt.) Banks, and to compare the level of ORS between the two categories of Public and Private Banks.
3. To empirically evaluate the existing level of HRD-climate, in all the select (Pub. and Pvt.) Banks, and to compare the level of HRD-Climate, between the two categories of Public and Private Banks
4. To analyze the interplay (inter-correlations) of role-stress and HRD-climate dimensions in the selected 2 categories of Public and Pvt. Banks.
5. To make suggestions, for the removal of stress in roles, on the basis of emerging empirical findings. and,
6. To generate suggestions, founded on the study undertaken to help build a healthy HRD-climate.

3.7 Type of Research

The study is explorative as well as descriptive in nature. According to Mouton and Marais (1990),\(^{450}\) the "research aim" provides a broad indication of what must be achieved by the research and this encompasses different types of research. Is the aim of the research to describe, explain or predict, or explore a new area? Two main types of research (Descriptive and Explanatory) are discussed below, with reference to their roles in this specific research.

3.7.1 Descriptive research

A study which wants to portray the characteristics of a group or individual or situation is known as descriptive study. In this type of research, an in-depth investigation and description of phenomena, such as specific situations, groups, cultures or objects are undertaken (Mouton and Marais, 1990).\(^{450}\) The aim of this type of research is to systematically classify the variables of a construct. The overriding goal is to describe the attributes as accurately and precisely as possible. A descriptive research project shows statistical analysis of the variables being tested quantitatively through analysis of variances between subgroups.

3.7.2 Explanatory research

In this type of research, the main aim is to indicate causality between variables or events. Explanatory research is used in cases where the researcher goes beyond showing the differences between variables by indicating the magnitude of the difference and where any correlations between variables exist. An attempt will be made to determine the relationship between perceived occupational stress, psychological strain and coping/moderating resources. The direction of the relationship will be discussed with reference to the research subgroups - age, seniority, race and gender - (Mouton & Marais, 1990).\(^{450}\)
3.7.2.1 Exploratory or Formulative study

Exploratory or Formulative studies are those which aim at gaining familiarity with a phenomenon or which aim at achieving insights into the phenomenon or studies which deal with formulation of a more precise research problem or developing a hypothesis. These studies represent earlier stage of science. Much of social research is of an exploratory nature. "Exploratory study" is said to be the primary stage of research. The next stage is occupied by the "descriptive study" and the final stage of research is to find out causal relationship (known as "experimental study"). However, a study can very well be a mixture of these various types, viz., exploration, description and experimentation.- Rao K.V. (1993).\(^{451}\) Besides the research process may also tend to be circular over a period of time. Boyd, Jr. et al., (1990).\(^{452}\) Exploratory research is most useful to define and develop the most promising hypotheses, which are then tested by conclusive research. A by-product of the conclusive research may be a suggestion of a new opportunity or a new difficulty. The following diagram suggests the process.

**Figure 3.7.2.1: By-product of a conclusive research**

![Diagram](https://via.placeholder.com/150)

Source: K.V.Rao ,Research Methodology in Commerce & Mgmt.

[188]
3.7.3 The present empirical research is explorative and descriptive
Exploratory or formulative research is a study with a view to gain familiarity with a phenomenon or to achieve new insights into it. This research, aims to explore issues in detail and develop familiarity with the problem or concept to arrive at the formulation of explicit research hypotheses by initial flexible approach. The descriptive research portrays accurately the characteristics of a particular individual, situation or a group, and is a fact finding investigation with adequate interpretations. Descriptive research includes surveys and fact-finding enquiries of different kinds, the major purpose being description of the state of affairs as it exists at present.

The research problem of the present study is describable. Facts regarding the problem can be quantified along with qualitative description. Comparison of opinions expressed by different components of the study and sample are part of study. Finally a systematic procedure for collection and analysis of data is laid down to pursue the study in systematic manner. The present research is also an empirical research (which involves the collection of new empirical data). The study is explorative as well as descriptive in nature.

3.8 Theoretical Framework (Research Model)
Theoretical framework for the Organizational Role Stress and HRD climate, interplay, is hereby developed based on the objectives of the study, literature survey and theory in these areas. The literature has indicated that dysfunctional individual and organizational consequences result from the existence of role stress in an organization. This research also infers that there exists a negative relationship between job stress and job satisfaction. A study by Igharia and Greenhaus (1992)(453) revealed that "job stress (ORS) affects job satisfaction and career satisfaction negatively". ORS variables negatively affect (influence) the job satisfaction. HRD climate variables contribute to job satisfaction and moderate ORS dimensions.
This research investigates the interrelationship of the dimensions of ORS and HRD-Climate constructs. Role space stress and role set stress constitute ten dimensions of ORS. HRD-Climate has three categories namely general supportive climate, HRD Mechanisms, and OCTAPAC-Culture. These three help (contribute) and are helped by each other.

The following research model, devised by the researcher, envisages that the ORS variables negatively affect(influence) HRD climate variables and moderate ORS dimensions. The sound preposition is that there exists a “Reciprocal Dependency of Organizational HRD Climate and ORS”.

**Figure 3.8: A Schematic diagram of the conceptual framework/research model of ORS & HRD Climate**

3.9 Hypothesis

Hypothesis is a logical starting point in the search for facts or truth. It serves as a basis for future knowledge. A hypothesis after verification and testing emerges
as a sound body of knowledge. When facts are drawn, they constitute a theory. As such, the relation between theory and hypothesis is very close. William H. George (1936). \(^{(454)}\) has observed, "In practice a theory is an elaborate hypothesis which deals with more types of facts than does the simple hypothesis." The basic purpose of the hypothesis is its utility in explaining the social phenomenon. With statistical techniques, a researcher is able to decide whether or not his theoretical hypotheses are confirmed by the empirical evidence. A **null hypothesis** \((H_0)\) is a statement about status quo. It is a conservative statement that communicates the notion that any change from what has been thought to be true or observed in the past will be due entirely to random error. The purpose of setting up the null hypothesis is to provide opportunity to nullify it. **Alternative hypothesis** \((H_a)\) states the opposite of the null hypothesis.

The literature review presented in chapter-2 clearly indicates that both the "organizational role-stress (ORS)" and "organizational HRD-climate" are complex and interrelated concepts and affect individual and organizational work performance, and job satisfaction. In line with literature review, aims of the study, and research objectives, **statement of hypothesis** is developed as follows:

- **H\(_{01}\)**: There is no relationship between perceived role stress and gender.
- **H\(_{a1}\)**: There is a relationship between perceived role stress and gender.
- **H\(_{02}\)**: There is no relationship between perceived role stress and marital Status.
- **H\(_{a2}\)**: There is a relationship between perceived role stress and marital Status.
- **H\(_{03}\)**: There is no relationship between perceived role stress and working status of spouse.
- **H\(_{a3}\)**: There is a relationship between perceived role stress and working status of spouse.
- **H\(_{04}\)**: There is no relationship between perceived role stress and family type.
- **H\(_{a4}\)**: There is a relationship between perceived role stress and family type.
- **H\(_{05}\)**: There is no relationship between perceived role stress and age group.
- **H\(_{a5}\)**: There is a relationship between perceived role stress and age group.
- **H\(_{06}\)**: Salary has impetus to brave role stress longer.
\( H_{a6} \)  Salary has no impetus to brave role stress longer.
\( H_{07}: \) There is no relationship between perceived role stress and education.
\( H_{a7}: \) There is a relationship between perceived role stress and education.
\( H_{08}: \) There is no significant difference between "Inter Role Distance (IRD)" in public and private banks.
\( H_{a8}: \) There is a significant difference between "Inter Role Distance (IRD)" in public and private banks.
\( H_{09}: \) There is no significant difference between "Role Stagnation (RS)" in public and private banks.
\( H_{a9}: \) There is a significant difference between "Role Stagnation (RS)" in public and private banks.
\( H_{010}: \) There is no significant difference between "Role Expectation Conflict (REC)" in public and private banks.
\( H_{a10}: \) There is a significant difference between "Role Expectation Conflict (REC)" in public and private banks.
\( H_{011}: \) There is no significant difference between "Role Erosion (RE)" in public and private banks.
\( H_{a11}: \) There is a significant difference between "Role Erosion (RE)" in public and private banks.
\( H_{012}: \) There is no significant difference between "Role Overload (RO)" in public and private banks.
\( H_{a12}: \) There is a significant difference between "Role Overload (RO)" in public and private banks.
\( H_{013}: \) There is no significant difference between "Role Isolation (RI)" in public and private banks.
\( H_{a13}: \) There is a significant difference between "Role Isolation (RI)" in public and private banks.
\( H_{014}: \) There is no significant difference between "Personal Inadequacy (PIn)" in public and private banks.
\( H_{a14}: \) There is a significant difference between "Personal Inadequacy (PIn)" in public and private banks.

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\( H_0{15} \): There is no significant difference between "Self Role Distance (SRD)" in public and private banks.

\( H_{a15} \): There is a significant difference between "Self Role Distance (SRD)" in public and private banks.

\( H_0{16} \): There is no significant difference between "Role ambiguity (RA)" in public and private banks.

\( H_{a16} \): There is a significant difference between "Role ambiguity (RA)" in public and private banks.

\( H_0{17} \): There is no significant difference between "Resource Inadequacy (RIn)" in public and private banks.

\( H_{a17} \): There is a significant difference between "Resource Inadequacy (RIn)" public and private banks.

\( H_0{18} \): There is no significant difference between "Total Organizational Role Stress (TORS)" in public and private banks.

\( H_{a18} \): There is a significant difference between "Total Organizational Role Stress (TORS)" in public and private banks.

\( H_0{19} \): There is no significant difference \( \{i.e., \neq \ (not \ equal)\}\) in General HRD Climate (GC) experienced by private bank and public bank executives

\( H_{a19} \): There is a significant difference \( \{i.e., \neq \ (not \ equal)\} \) in General HRD Climate (GC) experienced by private bank and public bank executives.

\( H_0{20} \): There is no significant difference in OCTAPAC Culture (OC) experienced by private bank and public bank executives.

\( H_{a20} \): There is a significant difference in OCTAPAC Culture (OC) experienced by private bank and public bank executives.

\( H_0{21} \): There is no significant difference in HRD-Mechanism (HRDM) experienced by private bank and public bank executives.

\( H_{a21} \): There is a significant difference in HRD-Mechanism (HRDM) experienced by private bank and public bank executives.

\( H_0{22} \): There is no significant difference in Total HRD Climate (HRDCL) experienced by private bank and public bank executives.

\( H_{a22} \): There is a significant difference in Total HRD Climate (HRDCL) experienced by private bank and public bank executives.
\( H_{023} \): There is no significant inter-correlation between ORS Dimensions \( (r = 0) \).

\( H_{a23} \): There is a significant inter-correlation between ORS Dimensions \( (r \neq 0) \).

\( H_{024} \): There is no significant relationship between organizational role stress and organizational HRD-climate in public banks \( (i.e. \ r = 0) \).

\( H_{a24} \): There is a significant relationship between organizational role stress and organizational HRD-climate in public banks \( (i.e. \ r \neq 0) \).

\( H_{025} \): There is no significant relationship between organizational role stress and organizational HRD-climate in private banks \( (i.e. \ r = 0) \).

\( H_{a25} \): There is a significant relationship between organizational role stress and organizational HRD-climate in private banks \( (i.e. \ r \neq 0) \).

3.10 Data Base

"Role stress", being a psychological state differs from individual to individual. "HRD Climate" also relates to the feel of employees towards the type and extent of climate prevailing in the organization. On account of this, the study relies on self-reported responses of employees on the various measures used. Self-report has been acknowledged the most popular tool not only in organizational research but also in social and behavioral sciences.

As such to meet the objectives of the study, the information has been collected from primary sources. For taking responses against the two survey instruments, general instructions and clarifications were enthusiastically given. To generate real interest the significance and purpose of the research was made known. The crucial need to evoke free and frank expressions was emphasized. It was firmly assured that in no case the names of the respondents will be revealed. Their anonymity will be zealously guarded. Thereafter, every respondent was given; one set each of the following:

1). (i) Detailed Instruction Letter, (ii) ORS - SCALE (Questionnaire), with (iii) ORS Scale-Answer Sheet; and

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2). (i) Detailed Instruction Letter, (ii) HRD-Climate Survey (Questionnaire), with (iii) HRD-Climate Survey-Answer Sheet.

Note: The provision of one page answer sheets was a special devise for easy compilation of data and to save paper, as the instruction letter and questionnaires could be reused again and again.

3.10.1 Data Collection Period

The researcher has taken (anonymous) responses of bank employees by using two research instruments (questionnaires): 1. "ORS-Scale" and 2. "HRD-Climate Survey" during the period December, 2012 – May, 2013.

3.10.2 Primary Sources of Data Collection

Basically, stress in its wider concept is found to be a multidimensional complex psychological construct influencing every facet of human life, viz., family, society, occupation, job, role demands etc. However, the present research scope has been confined to investigate role related work stress with reference to executive role stress of public and private sector banks in NCR-Delhi and to find out the impact of HRD climate thereon.

3.10.3 Secondary Sources of Data Collection

The secondary sources of data collection included the sources of existing data for the research study, viz., bank records relating employee culture and performance, audit reports, HRD climate development polices, role-structure, role conflict, HR polices/interventions relating role stress prevention, bank websites, bank magazines and publications.

3.11 Population/Universe of the study

This is a comparative study of select of public sector banks (PSB) and private sector banks situate in NCR-Delhi. The population/universe for the study comprises of all public and private banks operating in NCR. In this study Public
sector bank comprise of SBI and Canara Bank; and private sector bank comprise of ICICI and ING Vysa Bank. For the present research the geographical scope of NCR- Delhi is specifically chosen because all major public and private banks are found to operate extensively over there.

3.11.1 PUBLIC SECTOR BANKS (PSB):

PSB are the ones in which the government has a major holding. Public Sector Banks, in India, dominate over 75% of deposits and 71% of advances in the banking industry. The public sector banks are the nationalized banks and are divided into two groups viz.,

(i) State Bank of India and seven SBI Associates/ subsidiaries, and other

(ii) Nationalized banks.

3.11.1.1 State Bank of India (SBI) and its seven subsidiaries:

The largest bank, and the oldest still in existence, is the State Bank of India, which originated in the Bank of Calcutta in June 1806, which soon thereafter became the Bank of Bengal. During British regime in India, three Presidency Banks were opened one each in Bengal (1809), Bombay (1840) and Madras (1843) with powers to issue Notes. In the year 1921, due to banking crisis during First World War, the three Presidency Banks merged to form "Imperial Bank of India".

After independence, in the year 1955, Imperial Bank of India was nationalized and renamed as "State Bank of India" with a primary mandate to go to rural areas by opening at least 400 branches immediately.

In 1957, the seven banks that were earlier catering to the rulers of different areas or States viz., 1. Patiala, 2.Bikaner & Jaipur, 3.Indore, 4.Saurashtra, 5.Hyderabad, 6.Mysore,and 7. Travancore, became subsidiaries of SBI.

3.11.1.2 Nationalized Banks:
In 1969 and 1980, Government of India nationalized 14, and 6 major banks respectively. After the merger of New Bank of India with Punjab National Bank during the era of "Financial Sector Reforms", the number of PSBs have become 27, (19, nationalized + 8, SBI & SBI Associates). The State Bank of India and seven SBI Associates/ subsidiaries, and other Nationalized Banks together constitute the list of public sector banks which is a part of the universe for the present study, and are shown in the following two tables.

(a) **State Bank of India & subsidiaries**: These 8-banks, are listed in the below given Table 3.11.1.2

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>State Bank of India and subsidiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>State Bank of India</td>
</tr>
<tr>
<td>2.</td>
<td>State Bank of Bikaner &amp; Jaipur</td>
</tr>
<tr>
<td>3.</td>
<td>State Bank of Hyderabad</td>
</tr>
<tr>
<td>4.</td>
<td>State Bank of Indore</td>
</tr>
<tr>
<td>5.</td>
<td>State Bank of Mysore</td>
</tr>
<tr>
<td>6.</td>
<td>State Bank of Patiala</td>
</tr>
<tr>
<td>7.</td>
<td>State Bank of Saurashtra</td>
</tr>
<tr>
<td>8.</td>
<td>State Bank of Travancore</td>
</tr>
</tbody>
</table>

**SOURCE:** By the researcher.

(b) **Nationalized banks**: These are 19- banks, as shown in the following table.

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Name of Nationalized Bank</th>
<th>Sr. No</th>
<th>Name of Nationalized Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Allahabad Bank</td>
<td>11.</td>
<td>Indian Overseas Bank</td>
</tr>
</tbody>
</table>

[197]
<table>
<thead>
<tr>
<th></th>
<th>Bank of India</th>
<th></th>
<th></th>
<th>Punjab and Sind Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Canara Bank</td>
<td>16.</td>
<td>17.</td>
<td>Union Bank of India</td>
</tr>
<tr>
<td>7.</td>
<td>Corporation Bank</td>
<td>---</td>
<td>---</td>
<td>United Bank of India</td>
</tr>
<tr>
<td>8.</td>
<td>Dena Bank</td>
<td>18.</td>
<td></td>
<td>Vijaya Bank</td>
</tr>
<tr>
<td>9.</td>
<td>IDBI Ltd</td>
<td>19.</td>
<td></td>
<td>Uco Bank</td>
</tr>
<tr>
<td>10.</td>
<td>Indian Bank</td>
<td>---</td>
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</tr>
</tbody>
</table>

**SOURCE:** By the researcher.

### 3.11.2 PRIVATE BANKS IN NCR- DELHI:

The private-sector banks in India represent part of the Indian banking sector that is made up of both private and public sector banks. These are the banks where greater parts of stake or equity are held by the private shareholders and not by government. In 1921, all the banks in India were private.

Since liberalization in government banking policy in 1990s, old and new private sector banks have re-emerged. These have grown faster and bigger over the two decades since liberalization using the latest technology, providing contemporary innovations, monetary tools, and techniques. The banks, which were not nationalized at the time of bank nationalization that took place during 1969 and 1980 are known to be the "old private-sector banks". These were not nationalized, because of their small size and regional focus.

The banks, which came in operation after 1991, with the introduction of economic reforms and financial sector reforms are called "new private-sector banks". Banking Regulation Act was amended in 1993, to permit the entry of new private-sector banks in India.

In 1994, Reserve Bank of India issued a fresh policy to liberalize limited number of private banks. Thus private banks in India can be categorized as: (1) Old Private Sector Banks, and (2) New Private Sector Banks, as tabulated below:

[198]
Table 3.11.2: *List of Old Private Sector Banks*

<table>
<thead>
<tr>
<th>No.</th>
<th>Old Private Sector Banks</th>
<th>No.</th>
<th>Old Private Sector Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bank of Rajasthan Ltd.</td>
<td>8.</td>
<td>Karnataka Bank Ltd.</td>
</tr>
<tr>
<td>3.</td>
<td>City Union Bank Ltd</td>
<td>10.</td>
<td>Lakshmi Vilas Bank Ltd.</td>
</tr>
<tr>
<td>4.</td>
<td>Dhanlakshmi Bank Ltd.</td>
<td>11.</td>
<td>Nainital Bank Ltd.</td>
</tr>
<tr>
<td>6.</td>
<td>ING Vysya Bank Ltd.</td>
<td>13.</td>
<td>South Indian Bank Ltd.</td>
</tr>
</tbody>
</table>

*Source:* By the researcher.

Table 3.11.2.a: *List of New Private Sector Banks*

<table>
<thead>
<tr>
<th>No.</th>
<th>New Private Sector Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ICICI Bank</td>
</tr>
<tr>
<td>2.</td>
<td>HDFC Bank</td>
</tr>
<tr>
<td>3.</td>
<td>Kotak Mahindra Bank</td>
</tr>
<tr>
<td>4.</td>
<td>Axis Bank (earlier UTI Bank).</td>
</tr>
<tr>
<td>5.</td>
<td>Yes Bank</td>
</tr>
<tr>
<td>6.</td>
<td>IndusInd Bank</td>
</tr>
</tbody>
</table>

*Source:* By the researcher.

3.12 Sample Design

As discussed, population/universe of the study is very vast. So, the investigator needs to plan a representative sample. Sampling is a fundamental method of inferring information about the entire population instead of measuring every
member of the population. Developing a proper sampling technique is very crucial as it can greatly affect the authenticity of the results.

Due care is taken that the sample is representative of the population. A sample size of 592 had been planned for the present study. The sample sizes in each category were decided on the basis of their proportional strengths in the aggregate population.

The broad particulars of sample design are:

- **Type of Universe:** Finite
- **Sampling Unit:** NCR
- **Source List:** Public and private sector Bank Executives
- **Size of Sample:** 592
- **Parameter of Interest:** estimating ORS and HRD climate and their Interplay in Public & private sector bank executives.

### 3.12.1 Sources of data

The study will consist of primary and secondary data. The primary data was collected by direct interview through two questionnaires viz., i). ORS-Scale Questionnaire, and ii). HRD-Climate Survey. The secondary data was collected from research publications, standard journal and periodicals and from respective records of the banks.

### 3.12.2 Sample Size

The sample size was arrived at as under:

- The final sample for the study comprised of 592 bank executives.
- They were selected from a sample of four banks.
- The four banks included 2-public and 2-private banks, situate in NCR.
- These four banks were selected by stratified random sampling method based on two strata of old and new banks.
- Thereafter, from each of these 4-banks their 18-branches were selected by at random method for the onward sample collection of executives.
There from, a sample of 148 executives each was selected at random comprising of 117, 23, and 8 executives respectively from junior, middle, and senior management levels, and thus aggregating a sample of 592 bank executives.

Due care was taken that the sample is representative of the universe in all respects.

3.12.2.1 Sample Selection Methodology

It is important to note that the development phase of Indian banks can be classified as:

(i) Old (classical or traditional) banks, and
(ii) New (modern) banks.

So, the two lists of public, and private sector banks operating in the NCR-Delhi were prepared separately. Each list then as per RBI scheduling, was segmented into old and new banks. Then from each segment/group (strata), at random (by draw), one bank was selected.

Stratified Random Sampling Method, was used for the selection of two public and two private banks. Stratified random sampling method is used when the population is heterogeneous rather than homogeneous and the researcher wants to obtain a representative sample across many population attributes. The procedure calls for categorizing the heterogeneous population into groups that are homogeneous in themselves. Thus by "stratified random sampling" method "the sample for the study" comprising of four banks, i.e., two public sector and two private sector banks were selected. (The first category in the following selections relates to banks old in origin, and the second to new banks.)

a) Public Sector Banks: comprise of two important segments, viz.,
(1) State Bank of India and its subsidiaries, and (2) nationalized banks. One bank each from these two segments was selected at random. The names of two public sector banks, selected at random,
from the above two segments and constituting the sample for the study are:


b) Private Sector Banks: comprise of two categories, viz., (1) Old Private Sector Banks and (2) New Private Sector Banks. From these two categories/strata one bank each was selected at random. The names of two private sector banks, selected at random, from the above two segments and forming the sample for the study are:

1. ING Vysya Bank Ltd., and .............. (An Old Bank).
2. ICICI Bank ......................... (A New Bank).

❖ Stratified at random Sampling Method: was used for the selection of Bank Executives. From, the stratified random sample of two public and two private banks, derived under aforesaid detailed method, their 18 branches were selected by at random sampling method which comprised their head offices, main-branches, branches, and sub-branches spread far and wide in the National Capital Region of India.

❖ The Final Study Sample" comprised as under:

- Two public sector banks (one old and one new),
- Two private sector banks (one old and one new),
- From each of these four banks, their individual 18 branches were identified by at random method. Therefrom, 148 executives were selected at random consisting of 117, 23, and 8 executives respectively from junior, middle, and senior management levels.
- The final sample comprised of 592 executives viz., (468-Junior, 92-Middle, and 32-Senior Management) levels.

3.13 Profile of selected banks

It is essential to understand the nature and profile of the four banks which out of the universe have been by at random method selected to form the base sample for the onward selection of sample elements (bank executives).
3.13.1 STATE BANK OF INDIA - A Public Sector Bank, (Sample No.1).

State Bank of India (SBI) is an oldest(lineage traced to June 02, 1806), and multinational banking and financial services company based in India. It is a government-owned corporation having headquarters in Mumbai, Maharashtra. Today, SBI is one of the Big Four banks of India, along with ICICI Bank, Punjab National Bank and Bank of Baroda. As of December 2013, SBI proudly held assets worth US$388 billion, and 16,000 branches, including 190 foreign offices, making it the largest banking and financial services company in India by assets. Today, SBI has 20% market share in deposits and loans among Indian commercial banks. As on 30 June 2013, Government of India held around 62% equity shares in SBI.

Employees: As on March 31, 2013, SBI is one of the largest employers in the country having 228,296 employees; out of whom there were 46,833 female employees (21%) and 2,402 disabled employees (1%). The percentage of Officers, Assistants and Sub-staff was found to be 35%, 48% and 17% respectively. (Annual Report 2012-2013).

Awards & Recognitions: SBI won "Best Public Sector Bank" award in the D&B India's study on 'India's Top Banks 2013. State Bank of India won three IDRBT Banking Technology Excellence Awards 2013 for “Electronic Payment Systems”, “Best use of technology for Financial Inclusion”, and “Customer Management & Business Intelligence” in the large bank category. SBI was ranked 298th in the Fortune Global 500 rankings of the world's biggest corporations for the year 2012. SBI was 11th most trusted brand in India as per the Brand Trust Report 2010. Some of the major competitors for SBI in the banking sector are Axis Bank, ICICI Bank, HDFC Bank, Punjab National Bank, Bank of Baroda, Canara Bank, and Bank of India. However in terms of average market share, SBI is by far the largest player in the market.

History: SBI is the oldest commercial bank in the Indian Subcontinent. Government of The roots of the State Bank of India lie in the first decade of 19th century, when the Bank of Calcutta, later renamed the Bank of Bengal, was
established on June 02, 1806. The Bank of Bengal was one of three Presidency banks, the other two being the Bank of Bombay (incorporated on April 15, 1840) and the Bank of Madras (incorporated on July 01, 1843). All three Presidency banks were incorporated as joint stock companies and were the result of the royal charters. These Presidency banks also had the exclusive right to issue paper currency till 1861 when by the Paper Currency Act, this right was taken over by the Government of India.

The Presidency banks amalgamated on January 27, 1921, and the re-organized banking entity took as its name Imperial Bank of India. The Imperial Bank of India remained a joint stock company but without Government participation.

Pursuant to the provisions of the State Bank of India Act of 1955, the Reserve Bank of India, which is India's central bank, acquired a controlling interest in the Imperial Bank of India. On July 01, 1955, the Imperial Bank of India became the State Bank of India. Thus, government of India nationalized the Imperial Bank of India in 1955, with Reserve Bank of India's 60% stake, and renamed it the State Bank of India (July 01, 1956). In 2008, the Indian government also took over the stake held by the Reserve Bank of India.

In 2008 the government of India acquired the Reserve Bank of India's stake in SBI so as to remove any conflict of interest because the RBI is the country's banking regulatory authority. In 1959, the government passed the State Bank of India (Subsidiary Banks) Act, which made eight state banks associates of SBI. A process of consolidation began on 13 September 2008, when the State Bank of Saurashtra merged with SBI.

SBI has acquired local banks in rescues. The first was the Bank of Behar (est. 1911), which SBI acquired in 1969, together with its 28 branches. The next year SBI acquired National Bank of Lahore (est.1942), which had 24 branches. Five years later, in 1975, SBI acquired Krishnaram Baldeo Bank, which had been established in 1916 in Gwalior State, under the patronage of Maharaja Madho Rao Scindia. SBI acquired the Bank of Cochin in Kerala, which had 120 branches. On October 7, 2013, Arundhati Bhattacharya became the first woman to be appointed Chairperson of the bank.
3.13.2 CANARA BANK - A Public Sector Bank, (Sample No. 2).

Canara Bank, (founded 01/07/1906) is a premier commercial public sector bank in India. It is now 107 year old bank. Today Canara Bank has a strong pan India presence with 4552 branches and over 4543 ATMs, catering to all segments of an ever growing clientele base of 5.39 crore. Across the borders, the Bank has 5 branches, one each at London, Hong Kong, Shanghai, Leicester and Manama and a Representative Office at Sharjah, UAE. The bank has its headquarter in Bangalore, Karnataka. It is a leading financial conglomerate in India, with as many as nine subsidiaries/sponsored institutions/joint ventures in India and abroad. In its second century of service to the nation, the bank aspires to emerge as a Global Bank with Best Practices.

It was founded on 1st July, 1906, by late Shri Ammembal Subba Rao Pai, a philanthropist as 'Canara Bank Hindu Permanent Fund', and was formally registered with a capital of 2,000 shares of ₹50/- each, with just four employees. Canara Hindu Permanent Fund was renamed as Canara Bank Limited in 1910. On July 19, 1969 fourteen major banks in the country, including Canara Bank, were nationalized.

In 1984 merger with the Laksmi Commercial Bank Limited took place. In 2004-2005 Canara Bank achieved 100% computerization of its branches. In 2008-2009 the bank crossed the coveted ₹3-lakh crore in aggregate businesses, and the bank commissioned its third foreign branch at Shanghai. In 2009-2010 the bank crossed its aggregate business mark of ₹ 4-lakh crore; and the net profit of the bank crossed ₹ 3000-crore. In 2010 - 2011 the bank's branch network crossed the 3000mark. The bank's aggregate business also crossed ₹ 5 lakh crore mark and the net profit of the bank crossed ₹4000-crore and the bank's fourth foreign branch at Leicester and a representative office at Sharjah, UAE, was opened. The bank raised ₹ 1993-crore under QIP and the government holding was reduced to 67.72% post QIP.

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In 2011-2012 the total number of branches of the bank reached 3600. The bank’s fifth foreign branch at Manama, Bahrain was also opened. Highest dividend of 130% was paid for the year 2012-2013. As at September 2013, the total business of the Bank stood at ₹6,72,717 crore.

3.13.3 **ING VYSYA BANK LIMITED** - A Pvt. Sector Bank, (Sample No 3).

**ING Vysya Bank Ltd** is the prominent privately owned Indian multinational bank having Regd. Office at : ING Vysya House, No- 22, MG Road Bengaluru-560001, Karnataka, India, ING Vysya Bank was formed with the Vysya Bank Ltd, a premier bank in the Indian Private Sector and ING Group, a global financial powerhouse of Dutch origin, in the year 2002. With their core Banking Solution, IT oriented products and focused Retail Banking and Wholesale Banking Services, the Bank aims for sustainable growth to benefit all the stakeholders, clients, employees and society at large. With over 80 years of history in India and leveraging ING’s global financial expertise, the bank offers a broad range of innovative and established products and services. Today it has presence in over five countries.

**History:** ING Vysya Bank is the new changed name of **Vysya Bank Ltd., which was incorporated on March 29, 1930,** and it has been one the leading bank in India. In the year 1948, the bank acquired the status of a Scheduled Bank. Since then the Bank has grown in size and stature and has carved a distinct identity of being India's Premier Private Sector Bank. Vysya Bank, in 1985 became the largest private sector bank in India. In 1987 the company set up Vysya Bank Leasing. The company in 1990 promoted Vysya Bank Housing Finance. Then in 2001 the company forayed into insurance business by setting up ING Vysya Life Insurance Company.

**In 2002,** Dutch banking giant ING took over the management of the bank and the name was changed to ING Vysya Bank. This merger marked the first between an Indian bank and a foreign bank. Prior to this transaction, Vysya Bank had a seven-year old strategic alliance with erstwhile Belgian bank Banque
Bruxelles Lambert, which was also acquired by ING Group in 1998. ING Group, the highest-ranking institutional shareholder, currently holds a 44% equity stake in ING Vysya Bank, followed by Aberdeen Asset Management, private equity firm Chrys Capital, Morgan Stanley and Citigroup respectively. The bank markets an entire range of financial products and services, organized under three platforms (strategic lines of business): retail, private and wholesale banking.

As of March 2013, **ING Vysya is the seventh largest private sector bank in India with assets totaling ₹54,836 crore** (US$8.8 billion), net profit -Rs. 6,129.576 Million and operating a pan-India network of over **1,000 outlets**, including **527 branches**, which service over **two million customers**. The Bank has close to **10,000 employees**. It is also listed in Bombay Stock Exchange Limited and National Stock Exchange of India Limited. ING Vysya Bank was ranked among top five Most Trusted Brands among private sector banks in India in the Economic Times Brand Equity – Nielsen survey 2011. ING Vysya has been ranked the "Safest Banker" by the *New Indian Express* and among **"Top 5 Most Trusted Private Sector Banks"** by the *Economic Times*.

### 3.13.4 ICICI BANK -A Private Sector Bank, (Sample No 4).

**ICICI Bank** (founded 1994). Based on 2014 information, ICICI Bank is the **second largest bank** in India by assets and by market capitalization. It is also India's largest private sector bank with total assets of (₹ 5,367.95 billion (US$ 99 billion) at March 31, 2013 and profit after tax ₹ 83.25 billion (US$ 1,533 million) for the year ended March 31, 2013. The bank now has a network of 3,603 branches and 11,162 ATMs in India, and has a presence in 19 countries, including India. In the year 2012 the bank had 81,254 employees This Indian multinational bank and financial services company is headquartered in Mumbai.

"**ICICI Bank**" was promoted in 1994 by "ICICI Limited" (an Indian financial institution) and was its wholly-owned subsidiary. In 1988 ICICI's shareholding in ICICI Bank was reduced to 46% through a public offering of shares in India. ICICI Bank's equity shares are listed in India on Bombay Stock Exchange and
the National Stock Exchange of India Limited. In the year 2000, ICICI Bank made an equity offering in the form of American Depositary Receipts (ADRs) on the New York Stock Exchange (NYSE), thereby becoming the first Indian company and the first bank or financial institution from non-Japan Asia to be listed on the NYSE.

In 2001, it acquired the Bank of Madura Limited in an all-stock amalgamation. Later in the year (2001) and the next fiscal year (2002), the bank made secondary market sales to institutional investors.

**ICICI Ltd. was formed in 1955** at the initiative of the World Bank, the Government of India and representatives of Indian industry. The principal objective was to create a development financial institution for providing medium-term and long-term project financing to Indian businesses.

In October 2001, the Boards of Directors of ICICI and ICICI Bank approved the merger of ICICI and two of its wholly-owned retail finance subsidiaries, ICICI Personal Financial Services Limited and ICICI Capital Services Limited, with ICICI Bank. The merger was approved by shareholders of ICICI and ICICI Bank in January 2002, by the High Court of Gujarat at Ahmedabad in March 2002, and by the High Court of Judicature at Mumbai and the Reserve Bank of India in April 2002. Consequent to the merger, the ICICI group's financing and banking operations, both wholesale and retail, have been integrated in a single entity.

ICICI Bank, has subsidiaries in the United Kingdom, Russia, and Canada; branches in United States, Singapore, Bahrain, Hong Kong, Sri Lanka, Qatar and Dubai International Finance Centre; and representative offices in United Arab Emirates, China, South Africa, Bangladesh, Thailand, Malaysia and Indonesia. The company's UK subsidiary has established branches in Belgium and Germany. ICICI Bank offers a wide range of banking products and financial services to corporate and retail customers through a variety of delivery channels and through its specialized subsidiaries in the areas of investment banking, life and non-life insurance, venture capital and asset management.

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3.14 Research Instruments

Instruments are tools used to assess, appraise and evaluate various aspects of the human behaviour. This research, proposes to use the following two research instruments:

(1) "ORS-Scale" devised by Udai Pareek (1993), and
(2) "HRD-Climate Survey" devised by TV. Rao & E. Abraham (1986).

Reliability and Validity: Both these scales(with some demographical additions by the researcher) are being used in this research as the most preferred research instruments. Both these instruments are endowed with high reliability and validity. Reliability is the requirement that the application of a valid measuring instrument to different individuals and groups under different sets of circumstances will result in the same conclusions. Validity is the ability of the scale or measuring instrument to measure what it is intended to measure. The Validity of data depends upon the reliability of data. The validity coefficient is (always) less than or equal to the square root of the test’s reliability coefficient multiplied by the square root of the criterion’s reliability coefficient. The result of research study is powerful and valid if it gives the same result with repetitive measurements. With this the validity of research emerges. The process or system will be unreliable of it the repeated measurement gives different result.

Devising or making selection of a proper (perfect) research instrument has never been an easy task. For example, Smith and Pasen (1988), have estimated that at least 500 instruments to measure stress are available in the market. From this huge list, Downs, Driskill and Wuthnow (1990), selected and reviewed the following five dominant instruments, namely:

(1) "Derogatis's Stress Profile" by Derogatis (1987),
(2) "Ways of Coping Checklist" by Folkman and Lazarus (1980),
(3) "Kindler's Personal Stress Assessment Inventory" by Kindler (1988),
(4) "Maslach's Burnout Inventory" by Maslach and Jackson (1986), and
(5) "Organizational Role Stress - Scale" by Pareek (1982).
They reviewed the above five instruments that measure some aspect of stress, and found that these instruments are very different and, therefore, will serve different purposes in (communication) research. Currently, several of the instruments report that considerable research needs to be done to test the validity and reliability of the instruments in different contexts.

This research is interested in finding the interplay between organizational role stress and organizational HRD climate in the backdrop of public and private banks in the NCR area. The literature review has highlighted that both these concepts are highly fluid, mercurial, and complex. Though, the research in these areas has much progressed and these hitherto concepts have now matured into measurable research constructs. Still, haziness and darkness existed on the constituting totalistic and holistic dimensions, and on the existence of valid set of questions i.e., research instrument, capable of perfect assessment and measurement.

Hence, this research is credited to use two internationally accepted best instruments viz., (1)ORS-Scale and (2)HRD Climate Survey. Both,ORS-Scale and HRD Climate Survey are highly validated research instruments and ideally suit the purposes of this research. The researcher has incorporated "Demographic Section" in them. These instruments are annexed in the appendix portion of this thesis. Both instruments are discussed hereunder.

3.15 ORS Instrument: "ORS-Scale" - Prof. Udai Pareek

Introduction:

Earlier Version (8-dimensions & 40-Items)-Pareek (1982): An earlier version (the old version) of ORS- Scale was known as “Your Feelings About Your Role” and it contained 40-Items, five each, on eight role stresses. However, in the light of factor analysis of the results, role-ambiguity was split into role-ambiguity and role expectation conflict; and role-inadequacy into resource-
inadequacy and personal-inadequacy. Retest reliability for different role stresses and the total role stress were found significant at 0.001 level (one being significant at 0.003 level), Validity was found by item total score correlations (most of which were between 0.36 and 0.60) and factor analysis. Norms for various groups are given in Pareek (1982). This scale, is now not in use as it has been further developed as described below.

3.15.1 ORS-Scale (10-dimensions & 50-items):

This revised version is used in this study. The concept of role stress, and the psychological instrument used to measure it, have been taken from, Pareek, U. (2002). Training Instruments in HRD and OD p.483-87, chapter 67.

Herein, he proposed ten dimensions of organizational role stress and described a comprehensive and highly validated 50-item "ORS-Scale" to measure organizational role stress.

"ORS Scale" contains 5-items (questions/statements) for each role stress. Ten types of organizational role-stresses have been recognized, which are measured on five point Likert type scale (from 0 to 4). Thus the total scores on each role stress ranges from 0 to 20. Higher values indicate greater stress. An overall index of organizational stress may vary between 0 and 200 across all 50 items (statements)

3.15.2 ORS-Scale Questionnaire:

ORS-Scale is used in this research. It has been placed in the appendix. It has no provision to tick mark on it. So, the "ORS-Scale Questionnaire Booklet" may be used again and again to save bulky handling and precious paper.

3.15.3 ORS Scale-Answer Sheet:

It is a one page sheet and was given separately (pl. see Appendix) to every respondent along with the ORS Scale Questionnaire. This facilitated the researcher in filing and direct computing the data.
3.15.4 ORS - Scoring Key: *The answer sheet is very handy for scoring.*

- The total scores on each role stress range from 0 to 20.
- To get the total scores for each role stress, the ratings given are totaled horizontally (for five items).
- The 10 rows, respectively, rate the ten dimensions of the role stress. These are IRD, RS, REC, RE, RO, RI, PI, SRD, RA, and Rin, respectively.

For ORS rating respondents were simply required to, write their responses in the space provided in the “ORS Scale - Answer Sheet”, keeping in view the following marking instructions:

- Write 0 if you **never feel** this way.
- Write 1 if you **occasionally feel** this way.
- Write 2 if you **sometimes feel** this way.
- Write 3 if you **frequently feel** this way.
- Write 4 if you **always feel** this way.

<table>
<thead>
<tr>
<th>Table 3.15.4: ORS Scale - Answer Sheet</th>
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</thead>
<tbody>
<tr>
<td>For the use of Respondent (Answer Sheet)</td>
</tr>
<tr>
<td>Q. No</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
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<td>2</td>
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<td>9</td>
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<td>10</td>
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</table>

**SOURCE:** Pareek, Udey
3.16 Reliability analysis of the ORS-Scale used
ORS is measured on a five-point Likert scale with values ranging from 0 to 4. The scale is used to investigate the ORS arising from ten different role stressors as identified by Udey Pareek.

Cronbach's alpha coefficient confirms the internal consistency of the set of items in a scale. It is a commonly used test of internal reliability. It calculates the average of all possible split-half reliability coefficients and a computed alpha coefficient varies between 1, denoting perfect internal reliability, and 0, denoting no internal reliability. The figure of 0.600 and above lies in the accepted level of reliability. Whereas a figure of 0.75 or more is usually treated as rule of thumb to denote a good accepted level of reliability in researches. Table 3.17 shows Cronbach’s alpha values for the different dimensions of ORS. It shows all the stress dimensions except SRD are having high Cronbach’s alpha values. Since SRD value is greater than .600 it can be retained in the scale. The present study shows Cronbach's alpha, of 0.919 for the ORS Scale used in this research. So, the scale is most reliable for this particular research.

Table 3.16: Cronbach’s alpha value of ORS-stressors

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Abbreviation</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inter Role Distance</td>
<td>IRD</td>
<td>0.801</td>
</tr>
<tr>
<td>2</td>
<td>Role Stagnation</td>
<td>RS</td>
<td>0.717</td>
</tr>
<tr>
<td>3</td>
<td>Role Expectation Conflict</td>
<td>REC</td>
<td>0.718</td>
</tr>
<tr>
<td>4</td>
<td>Role Erosion</td>
<td>RE</td>
<td>0.719</td>
</tr>
<tr>
<td>5</td>
<td>Role Overload</td>
<td>RO</td>
<td>0.812</td>
</tr>
<tr>
<td>6</td>
<td>Role Isolation</td>
<td>RI</td>
<td>0.617</td>
</tr>
<tr>
<td>7</td>
<td>Personal Inadequacy</td>
<td>PI</td>
<td>0.720</td>
</tr>
<tr>
<td>8</td>
<td>Self-Role Distance</td>
<td>SRD</td>
<td>0.603</td>
</tr>
<tr>
<td>9</td>
<td>Role Ambiguity</td>
<td>RA</td>
<td>0.767</td>
</tr>
<tr>
<td>10</td>
<td>Resource Inadequacy</td>
<td>Rin</td>
<td>0.760</td>
</tr>
<tr>
<td></td>
<td>Organizational Role Stress</td>
<td>ORS</td>
<td>0.919</td>
</tr>
</tbody>
</table>

Source: Researcher’s data
3.17 “HRD-Climate Survey”- T.V. Rao & E. Abraham

OCTAPACE-instrument, to measure organizational climate, was a landmark of Prof. Uday Pareek, as it led to the development of a 38-item “HRD Climate Survey” by T.V. Rao and E. Abraham.

HRM/HRD Practices and Organizational Climate: HRD specialists face a real challenge to ensure the development, management and evaluation of an appropriate HRD Climate. As HRD culture facilitates effective implementation of HR-systems, so a general supportive climate is important for HRD function, if its programs have to be implemented effectively. HRD-climate reveals the perception of the employees in the development environment of an organization. The concept of climate with special reference to HRD Climate, i.e., "HRD climate" has been developed by Rao and Abraham (1986). The study shows that a good HRD Climate rather than HRD Practices are responsible for organization performance. HR practices create the atmosphere for the employees that facilitate their development.

HRD climate is the perception of the employees about the prevailing HRD Culture in the organization, which is mostly brought out through surveys covering the entire sample of employees. Mapping such HRD climate helps the organization to know the existing climate and to take necessary steps to modify or change certain practices if they feel there remains a gap between what they want and what is prevalent.

'HRD Climate Survey'- TV Rao and E. Abraham developed a 38-item HRD climate survey. It is a highly validated research instrument to assess HRD climate. The elements of HRD climate have three broad categories:

1. General Climate:

   The general supportive climate items deal with the importance given to human resource development in general by the top management and line managers. It also concerns good personal policies, positive attitudes towards competence building and development climate.
2. **HRD Mechanisms:**

This takes into account merit, innovation, employee welfare (quality of work life, performance-appraisal, training needs identification, self-renewal potential-appraisal, career planning, performance rewards, feedback and counselling, training, job-rotation, organizational learning and others. and,

3. **OCTAPAC Culture:**

This depicts the degree of Openness, Confrontation, Trust, Autonomy, Pro-action, Authenticity, Collaboration and the extent to which these values are promoted in the organization.

The questionnaire uses a five-point scale (weighted 0 to 4). it can be administered to all employees (especially supervisory and managerial staff) and a 'HRD climate profile' can be drawn up.

Thus the scores will range from 0 to 152 when the scores on all the 38 items are added to get a composite score. Scores closer to 150 indicate an excellent climate -which is rare. Scores above 114 indicate a good HRD climate. Scores below 76 indicate that there is considerable scope for improvement. The scores of all respondents may be analyzed item-wise and the areas needing improvement should be identified.

3.18 **Reliability analysis of the HRD-Climate Survey used**

The HRD-Climate Survey instrument was devised by T.V. Rao and E. Abraham. Cronbach's alpha coefficient confirms the internal consistency of the set of items in a scale. By convention, 0.75 is a good accepted level in exploratory researches. The data was tested for reliability and yielded a Cronbach Alpha score given below in the table. It indicates a very high level of internal consistency. Hence, the research instrument HRD-Climate Survey is found most reliable. So, the data collected is most reliable and fit for further study.
Table 3.18: Reliability Analysis: Cronbach Alpha

<table>
<thead>
<tr>
<th>HRD-Climate Survey</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall HRD CLIMATE (38 items)</td>
<td>0.84454</td>
</tr>
<tr>
<td>GROUP-1: General Climate (14 items)</td>
<td>0.87836</td>
</tr>
<tr>
<td>GROUP-2: HRD Mechanism (15 items)</td>
<td>0.79612</td>
</tr>
<tr>
<td>GROUP-3: OCTAPAC-Culture (9 items)</td>
<td>0.81227</td>
</tr>
</tbody>
</table>

Source: Researcher’s data

3.19 The Pilot Study

The term pilot study is used in two different ways in social science research. It can refer to so-called feasibility study which is a small scale version, or trial run, done in preparation for the major study. However, a pilot study can also be the pre-testing or 'trying-out' of a particular research instrument.

There are several reasons for conducting pilot studies viz., assessing the feasibility of a (full scale) study/survey, collecting preliminary data, developing and testing adequacy of research instruments, whether proposed methods or instruments are inappropriate or too complicated, establishing whether the sampling frame and technique are effective, determining what resources are needed for a planned study, developing a research question and research plan, estimating variability in outcomes to help determining sample size. Pilot study might give advance warning about where the main research project could fail. So, better not take the risk. Pilot test first

Pilot study was conducted as a procedure to improve the internal validity of the research questionnaire. The questionnaire was administered to pilot subjects in exactly the same way as it will be administered in the main study. Subjects were asked for the feedback to identify ambiguities or difficulties in questions (items) of the questionnaires. It gave an opportunity to discard all unnecessary, difficult or ambiguous questions. The time taken to complete both questionnaires was also recorded. It was decided whether it is reasonable tore-word or re-scale any
question that was not answered as expected, or to shorten, revise and, if possible, to re pilot again.

The present research relies on two highly accredited research instruments namely: 1."ORS-Scale Questionnaire" - Prof. Udai Pareek, and 2."HRD - Climate Survey" - Prof. T.V. Rao & E. Abraham. The instruments were improvised to include questions relating demographics. So, the need for pilot study could have been conveniently avoided as the two instruments being used to generate data are already high on reliability and validity. But the pilot study apart from this has a hoard of other benefits as enumerated above.

So, to be doubly sure and to find if the instruments fit the comprehension level of respondents, a pilot testing was conducted initially by administering the questionnaires to 30 respondents.

Since all the executives were graduate and above. Comprehension in English posed no problem and Hindi version of the questionnaires was not required. To assess demographic profile of the respondents; simple, precise and in easy to understand language questions were framed, pre-tested and incorporated in the main instruments. The information was also collected from the bank executives of all levels. No problem in the content of survey was apprehended.

The pilot testing was found successful as the instruments posed no problem. Interviews were also conducted with the bank executives for gathering ORS and HRD-Climate relating background information and constructive suggestions.

3.20 Overview of Statistical Instruments used for measures

Social research covers the entire spectrum of the socio development sector and is an amalgamation of various research techniques from diverse fields. Statistics plays a vital and indispensable role in management research. Statistics in research function as a tool in designing research, analysing data and drawing conclusions. In this study, to analyse the results, various statistical measures have been used such as Mean, Standard Deviation, Variance, Skewness,
kurtosis, Correlation, Regression analysis, Cronbach’s alpha, t-test, z-test F-test were performed through SPSS 19(trial version) and MS Excel 2007.

'Population' is the entire pool from which a statistical sample is drawn. The information obtained from the sample allows statisticians to develop hypotheses about the larger population. The variance is a measure of variability symbolized by $s^2$. Variance is the sum of the squared differences between data values and the mean, divided by the count minus one, $(n - 1)$;

$$\frac{[(x_1 - \text{mean})^2 + (x_2 - \text{mean})^2 + (x_3 - \text{mean})^2 + ... + (x_n - \text{mean})^2]}{[n - 1]}$$

The standard deviation, represented by $s$, is defined as the positive square root of the variance. It measures the degree of variability within a set of scores. The variance ($s^2$) is always positive. When the data points are clustered around the mean, the variance is very small. If the data is scattered, the variance is large.

Skewness, summarizes the shape of distribution. It measures the extent to which the sample distribution deviates from normal distribution. Skewness is the tendency of the deviations from the mean to be larger in one direction than in the other. It can be thought as the tendency for one tail of the distribution to be heavier than the other. When mean, mode and median do not have the same value in a distribution, then it is known as a skewed distribution. Coefficient of skewness is

$$= \frac{\text{mean- mode}}{\text{std. dev.}}$$

Skewness signifies the extent of asymmetry.

In this aspect, the tendency of kurtosis is a measure of the relative peakedness or flatness of the curve defined by the frequency distribution. The kurtosis of a normal distribution is zero. If the kurtosis is positive, then the distribution is more peaked than a normal distribution. A negative value means that the distribution is flatter than a normal distribution.
Correlation analysis is used as a statistical tool to ascertain the association between two variables. The association between variables can be broken into three ways. 1. It is to be found whether the two variables are related or independent of each other. 2. If a relation is found between the two variables, then its nature and strength is found out. This means whether these variables have a positive or negative relationship and how close is the relationship. 3. To know if there is a causal relationship between them. This means the variation in one variable causes variation in another.

Regression is also one of the most frequently used techniques in social research. It is used in estimating the value of one variable based on the value of another variable. It does so by finding a line of best fit using ordinary least square method. The linear regression equation takes the form: Y=a+bx where Y is the dependent variable and x is the independent variable.

Cronbach's alpha coefficient confirms the internal consistency of the set of items in a scale. It is used test of internal reliability.

The test criteria that are frequently used in hypothesis testing are Z, t, F and chi-square. For difference of means, t-test is a technique used to test the hypothesis that the mean scores on some interval-scaled variable are significantly different for two independent samples or groups. The t test is a statistical test for the mean of a population. It should be used whenever all of the following criteria apply: The sample size n <30, the population standard deviation is unknown, and the population is known to be normally distributed.

F Ratio: F test is the ratio of variance between groups to the variance within groups i.e. the ratio of the explained variance to the unexplained variance. The F ratio is used to test whether or not two variances are equal. In ANOVA, this statistic is used in the F test to test the hypothesis that the group means are not equal to one another.
An F-test is used to compare 2 populations' variances. The samples can be of any size. It is the basis of ANOVA (analysis of the variation present in an experiment). It is a test of the hypothesis that the variation in an experiment is no greater than that due to normal variation of individuals' characteristics and error in their measurement. \textit{z-test and t-test} are basically the same; they compare between two means to suggest whether both samples come from the same population. Unlike the \textit{t-test} for single mean, \textit{z-test} is used if \( n \geq 30 \) and population standard deviation is known. \textit{z-test} for single variance is used to test a hypothesis on a specific value of the population variance. \textbf{Z-Score} is a Standard normal variable (Normal variable with mean = 0 and SD = 1).